

Early narrative skills in Chilean preschool: Questions scaffold the production of coherent narratives

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Abstract

This study examined whether or not question answering aided the construction of coherent narratives in pre-readers. Sixty Chilean preschoolers completed two tasks using a wordless picture-book: 30 children answered questions about the story and then produced a narrative using the book; 30 children completed the tasks in reverse order. Elements of coherence were assessed in both tasks, namely problem, resolution, and mental-states. The findings indicate that questions can scaffold the production of more coherent narratives. Narratives elicited after questions were judged to be more coherent than those produced before the question-answering task. In contrast, there were no differences between scores for the question answers in the different order conditions. The results are discussed regarding the interactional role of questions and the facilitative effect they have on focusing attention to the narrative task.

Early narrative skills in Chilean preschool: Questions scaffold the production of coherent narratives

Narrative is one of the main forms of complex discourse through which events are organised (Fivush & Haden, 2003). The production of a structured narrative involves the encoding and interpretation of information, and also the organisation of this information in a coherent form (McKeough, Generaux, & Jeary, 2006). Despite their complex nature, children are exposed to narratives from an early age (Dickinson & Snow, 1987; Stein & Albro, 1997; Ukrainetz, 2006), as they are involved in activities such as talking about past events, watching TV shows, and sharing books and stories at home or in school (Skarakis-Doyle & Dempsey, 2008). The ability to understand and produce narratives develops before children begin reading instruction (Paris & Paris, 2003), and narrative competence has been linked to school success (O'Neill, Pearce, & Pick, 2004) and to reading comprehension development and difficulties (Cain, 2003; Oakhill & Cain, 2012). Therefore, it is important to determine how we can foster narrative growth in the early years. The aim of the current study was to examine whether answering questions can improve narrative skills, particularly the ability to produce a coherent narrative, in preschoolers.

Narrative Skills and Reading Comprehension

It has been shown that children who have better narrative skills when starting kindergarten may have educational advantages over children with less developed narrative abilities (Griffin, Hemphill, Camp, & Wolf, 2004). For older children, several studies have demonstrated a link between narrative skills and reading comprehension. Snyder and Downey (1991) found that narrative skills explained unique variance in reading comprehension in children from 8 to 11 years old, and a higher proportion of variance in reading comprehension

was explained when children were 11 to 14 years old. Oakhill and colleagues found that the ability to organise a written story into a coherent sequence is an independent predictor of reading comprehension skill in 7- to 9-year-olds (Oakhill, Cain, & Bryant, 2003) and a longitudinal predictor of reading comprehension, over and above verbal ability and vocabulary, in this age group (Oakhill & Cain, 2012). Reese, Suggate, Long, and Schaughency (2010) found that at age seven, the quality of children's narratives, measured as a function of elements such as temporal terms, causal terms, evaluations, internal states, and dialogue, uniquely predicted their reading skill concurrently and one year later, even after controlling for their receptive vocabulary and early decoding. In younger children, Paris and Paris (2003) found that 5- to 8-year-olds' narrative comprehension and retelling were reliable indicators of reading comprehension ability.

Together, these findings indicate that narrative skills and narrative knowledge are strongly related to the ability to understand written texts. One reason for this relation is that children's ability to understand and produce fictional narratives includes many of the same skills important to reading comprehension, such as oral language skills, the ability to construct meaning, and memory resources (Paris & Paris, 2003). Despite these findings, there have been only a few studies investigating how best to foster narrative abilities in young children. Such knowledge is essential to develop support and interventions to foster narratives and early comprehension skills.

Narrative Features: Focus on Coherence

Research on narrative skill has focused on two main features: its sense-making function and its structure (McKeough, Davis, Forgeron, Marini, & Fung, 2005). Research that focuses on the sense making function of narrative investigates its use as a tool to organise experiences in a meaningful way (Bruner, 1990). This feature of narrative is more apparent when we consider

personal narratives and autobiographical memory (Nelson & Fivush, 2004). Research on this strand has also focused on the role of culture in the acquisition of narrative, concluding that autobiographical narratives adopt cultural patterns (Fivush & Nelson, 2004).

On the other hand, the structure of narrative and its development has been extensively studied, mainly addressing two main elements: coherence and cohesion (Cain, 2003; Shapiro & Hudson, 1991). Cohesion refers to how the relations between phrases or sentences are established through linguistic devices such as connectives and pronouns. It has been called local structure or microstructure (Halliday & Hasan, 1976; Liles, 1987; Shapiro & Hudson, 1991). Coherence, which is the focus of the current study, refers to the overall structure or macrostructure and, therefore, concerns a higher level of organisation between the story elements (Justice et al., 2006). In other words, coherence concerns how the events in the story are related (Cain, 2003) or how the events are connected in the mental representation constructed from the text (Sanders & Maat, 2006). In relation to coherence, narratives usually include a series of elements. Shapiro and Hudson (1991) proposed five main elements that are typically considered in traditional narratives: the beginning and orientation that provide a setting and introduce the characters; the initiating event, which refers to a situation which promotes the unfolding of the story; attempts made to achieve the goal; and a resolution of the main problem. Consequences and reactions to the final outcome can be included, but these elements are part of more sophisticated stories. These elements help to establish coherence. In addition, the type of relation between events (e.g., causal, temporal) can be used as an indicator of coherence (Stein, 1988).

A sensitivity to narrative coherence is important for comprehension of stories (Kendeou, van den Broek, White, & Lynch, 2009). Moreover, the ability to construct a coherent narrative has been used as a measure of reading comprehension in non-independent readers (Paris & Paris,

2003). Fictional stories are generally used in this type of research, because they are more decontextualized and constitute material that is closer to that used when children read a story (Paris & Paris, 2003). In this study, we examined whether or not children's ability to produce a fictional narrative that included these elements could be fostered by the use of questions.

Narrative Development

There is a large literature on the development of children's ability to organise narratives (Peterson & McCabe, 1991). McCabe and Rollins (1994) proposed some developmental stages of narrative, in which children include a greater number of narrative elements with age. At the age of 3 years and a half, children might be able to construct simple stories with no more than two story elements. As they get older, although children include more story elements, they fail to produce a proper sequence of events. By five years old, children produce stories with a sequence, but these stories often have an early ending, so the solution of the problem is missing. It is not until six years of age that children are able to create a narrative with a proper sequence of events that are linked together in an organised way. A wealth of evidence supports the general idea that as children become older, they produce narratives in which the story elements are related in a more coherent way. For example, Muñoz, Gillam, Peña, and Gulley-Faehnle (2003) found that narratives of 4-year-olds and 5-year-olds are different, the youngest tend to describe isolated events and the oldest narrate a sequence of events oriented to a purpose. Despite the clear progression of narrative skills, there are individual differences that cannot be explained just because of maturation or age (Lever & Sénéchal, 2011).

Cultural environment and home background have shown to impact children's performance in narrative skill (Heath, 1982). Children narratives might vary in both their content and organisation (Gorman, Fiestas, Pena, & Clark, 2011). McCabe and Bliss (2004-2005) found

that the shared narratives (those told by parents and children) of Latino children had an emphasis on family topics. Gorman et al. (2011) found that children coming from three ethnic backgrounds differed in their creativity to construct a narrative but not in the organisation of the story.

Although these studies suggest that cultural variations impact more directly on the content of the story than its organisation, there is evidence that more constrained tasks, such as fictional storytelling, might reduce the impact of those factors on children's performance, and are a less culturally-biased way to assess language skills (Craig, Washington, & Thompson- Porter, 1998).

How to Foster Narrative Skills?

Narratives do not vary just as function of age as previously discussed, and several studies have focused on the experiences that promote the development of narrative competence, especially personal narratives that depend on autobiographical memory and recall (Haden, Haine, & Fivush, 1997; Reese, Leyva, Sparks, & Grolnick, 2010; Reese & Newcombe, 2007). Reese and their colleagues, for example, have shown experimentally that a language style called *elaborative reminiscing*, specifically a "highly elaborative style in which [mothers] provided rich amounts of information in their statements and questions" (Reese & Newcombe, 2007, p.1153), promotes children's production of richer and more structured narratives about past experiences. This research does not speak to the role that questions might play in the production and comprehension of *fictional* narratives, which is our focus here.

The production and understanding of fictional narratives are tasks more closely related to the reading and writing challenges children will face in school, for at least two reasons. First, the majority of the texts that children encounter in the early school years are fictional stories, or at least with stories about other people, not themselves. In contrast, personal narratives in the family context are more frequent than fictional stories (McCabe, Bliss, Barra, & Bennett, 2008).

Second, the ability to structure a fictional story provides a transition to literacy because those narratives use a higher degree of decontextualized language, of the sort found in books (Purcell-Gates, 1988; Shapiro & Hudson, 1991). Fictional stories are less dependent on the context, and children get more familiar with them when entering formal education.

There is only a weak relationship between the quality of personal and fictional narrative productions (McCabe et al., 2008). Therefore, one possibility is that knowledge about experiences that promote the development of personal narratives may not be easily transferred to the development of fictional ones. As a result, other types of experience might be necessary to promote coherent fictional narratives. There are only a few empirical studies that show effects of how different types of interaction with narrative influence the quality of preschoolers' fictional narratives. For example, Baumer, Ferholt, and Lecusay (2005) carried out an intervention to promote narrative skill in children aged 5 to 7. Their findings showed that children who participated in rich dramatizations and enactment of stories produced more coherent stories than children in a control group. In addition, the use of toy prompts to elicit stories fosters children's narrative skills at four years old compared to direct elicitation (Ilgaz & Aksu-Koc, 2005). The current study attempts to test the efficacy of another strategy, questioning, for improving the quality of children's fictional narratives, specifically their coherence. In what follows, we review some theoretical and empirical arguments that support the use of questioning as a tool for improving children's structuring of a fictional narrative.

Narratives are constructed to be shared with others, so they are interpersonal in nature (Haden et al., 1997). This interpersonal feature of narrative is important from a sociocultural point of view. In the Vygotskian account (Vygotsky, 1978), every higher-order cognitive skill first appears as a social, inter-individual activity, and is then internalised to become an individual

psychological function. The concept of the zone of proximal development describes the space where this social interaction occurs (Vygotsky, 1978) and it helps us to identify the functions that are already happening socially, and are therefore ready to be internalised, but not yet part of the array of independent cognitive skills. To support children's development, these activities need to occur repeatedly in the social sphere, in order to make it possible for them to be eventually internalised. This social activity takes the form of guidance and support given to children by an adult or a more capable peer, and is called scaffolding. This is in reference to the fact that scaffolds are meant to be removed once the building is able to stand on its own, much as the social guidance becomes unnecessary once the function has been internalised (Rogoff, 1990). Thus, sociocultural theory could inform, for example, why specific ways of mother-child dialog are later reflected in the ways that children structure their personal memories (Haden et al., 1997; Reese, Leyva et al., 2010; Reese & Newcombe, 2007) and also on the ability to remember events (Boland, Haden, & Ornstein, 2003).

In addition, while telling stories, adults scaffold children by providing information about what is valued and should be included in narratives (Pontecorvo, 1993). One of the mechanisms used to interact with children that can be considered a scaffold during shared book reading is questioning. Questioning features extensively in both the school and the home and affects children's learning. de Rivera, Girolametto, Greenberg, and Weitzman (2005) found that educators' use of open-ended and topic-continuing questions promoted the production of more complex utterances in preschoolers. In addition, teachers' use of inferential questions during shared reading promotes inferential answers from children (Zucker, Justice, Piasta, & Kaderavek, 2010), and the inclusion of inferential and literal questions by an experimenter during shared reading improves vocabulary learning in young children (Blewitt, Rump, Shealy,

& Cook, 2009). Parent-child interactions during shared reading have also been studied, showing that parents who are highly elaborative (e.g. those who ask comprehension questions) facilitate the use of more complex language in children compared to parents who use little elaboration during shared reading (Fivush, 2007; Kaderavek & Justice, 2002). Dialogic reading, a rich shared-book reading intervention that includes the use of different types of questions (e.g. wh-, open ended, and recall prompting), facilitates vocabulary growth (Mol, Bus, de Jong, & Smeets, 2008).

To our knowledge, there are no studies that have examined the impact of questions on the production of coherent fictional narratives, a skill that is crucial to later reading comprehension. There are three relevant studies that identify this as an important issue to explore, both conducted within the framework of dialogic reading. In one, Zevenbergen, Whitehurst, and Zevenbergen (2003) found that children who participated in a dialogic reading intervention produced richer narratives than children who did not participate in the intervention. Expanding on that, Reese, Leyva et al. (2010) compared two interventions: children whose mothers use an elaborative reminiscing strategy improved their narrative skills in comparison to the use of dialogic reading. In another study, Lever and Sénéchal (2011) found that children produced more coherent narratives when they were part of the dialogic reading intervention group, suggesting that elaboration of the topics encourages the construction of more sophisticated stories.

Overall, the use of inferential and literal questions, and also the use of enriched interactions, such as dialogic reading, produces benefits on language skills. The benefits vary though depending on the type of intervention and also the type of language outcome measured. In the current study, we focus on the impact of questions to promote the construction of coherent narratives. We use a set of questions that combined literal and inferential information, tapping

the main structural elements of a story, that is, elements that serve to build a coherent plot at a global level.

Questions might foster narrative productions in several ways. First, questions might offer a guide of what is valued, what must be known, and what must be included within a story (Pontecorvo, 1993). In addition, questions might foster children to elaborate the information, helping to guide their reasoning about certain events and prompting the inclusion of structural elements in the narration that might not, otherwise, be included (Griffin et al., 2004). Questions might also play a role because they promote participation through language, they capture attention, and they can offer children a model for linguistic mechanisms (de Rivera et al., 2005). As well as helping to focus attention, questions might simplify cognitive demands and mark important aspects or features of the task (Graesser, McMahan, & Johnson, 1994).

Preschool Education in the Chilean Context

In Chile, about 43% of children up to five years of age attend some kind of preschool education setting (Ministerio de Planificación, 2009). These data vary with income, between 37% for the poorest 20% percent and 57% for the richest. Free preschool education is provided by four separate state institutions in Chile, all more or less dependent on the Ministry of Education: (i) a foundation called Integra, headed traditionally by the first Lady; (ii) a public institution called JUNJI that also administers other benefits such as free lunch to all school population, (iii) the local administration (Municipalities) through their public schools and preschools (iv) private administrators that run voucher schools. The last two serve mostly the 4- and 5-year olds, while the first two serve children from birth to five.

Traditionally, the Chilean view of preschool education has emphasized its role as a safe, emotionally nurturing setting where children can develop at their own pace and according to

their own abilities (Peralta, 2012). This view tends to reject the direct teaching of skills or contents in the preschool setting. In the last decades, however, Chilean policy makers and scholars have been pushing a view of the preschool classroom as a privileged setting for compensating SES gaps in language skills, emergent literacy, and basic knowledge. This new concept is reflected in official documents, educational programs, presidential speeches, and in the destination of public monies to improve preschool education (MINEDUC, 2012a).

In addition, most practitioners are not well trained to provide a quality preschool experience; teacher-training programs recruit from the bottom deciles of college applicants and appear to be of low quality. For example, a national evaluation of new teachers showed that 51% of the students that exit some preschool teacher-training program cannot express themselves in writing with a minimum of clarity, and 60% do not master the disciplinary content needed for teaching at this educational level (MINEDUC, 2012b). As can be expected, this results in kindergarten classrooms of very poor educational quality.

The typical Chilean kindergarten classroom is characterized by lots of unstructured play, little child-directed language, and little focus on emergent literacy skills, including for example, almost no explicit teaching of letters, sounds, and the meanings of new words (Strasser & Lissi, 2009; Strasser, Lissi, & Silva, 2009). The time spent in language activities is scarce, and mostly dedicated to general conversations (Strasser et al., 2009). Consequently, we did not expect there to be many practices targeted to promote narrative coherence in the Chilean preschool, nor for there to be significant exposure to the use of specific questioning strategies to support language development.

The Current Study

The aim of this study was to examine whether narrative production can be scaffolded through questions. The effect of questions on reading comprehension has been studied, however the impact of questioning on pre-readers' comprehension remains unanswered. If narrative resembles the process of reading comprehension, questions should have a role in promoting this skill. Just a few studies have looked at the effect of questioning in boosting some narrative-related skills. For example, Cassidy and DeLoache (1995) found that questions have an impact on preschoolers' memory of stories. However, the particular role of questions in promoting a better structuring of stories has not been yet studied. Specifically we asked: do questions about a story scaffold the production of a coherent narrative?

Two treatment groups participated in the study: one produced a narrative after hearing and answering a set of literal and inferential questions, the other group completed the two tasks in the reverse order. We expected that children who were asked questions about a story, considered as a scaffold, would produce a more coherent story than children who produced a narrative without prior exposure to the questions. In addition, we expect that answers to questions would not be affected in their quality by prior exposure to narrative, because individual narration would not provide a scaffold or an interactive mechanism to promote learning.

Method

Participants

Sixty kindergarten children (age range in months 62-74) from three Chilean schools participated in the study. Recruitment was carried out in two phases: 30 children were enrolled to be part of a larger study looking at school and home contributions to emergent literacy skills, and the other 30 children were recruited later (from the same schools). The group recruited first did

not experience a similar task as part of the larger study, so no priming effects were expected. The two groups completed different orders of the two narrative tasks as described below. In the three participating schools, equal numbers of children were selected: 20 children from a public school, 10 in each group (10 girls), 18 children from private schools, 9 in each group (7 girls), and 22 children from private with voucher schools, 11 in each group (11 girls). The children assigned to each condition did not vary by school type $\chi^2(2, N = 60) = .40, p = .82$.

In Chile, school type is closely related to socioeconomic status (Bellei, 2007), so this sampling criterion was used to ensure that the study included children from a range of different backgrounds. The Chilean Ministry of Education classifies schools in five socioeconomic status groups according to the average years of schooling of the parents and average family income. Our public school belonged to group B, which means that parents in the school have an average of nine years of schooling ($SD = 1$) and an average family monthly income equivalent to about US\$350. The private with voucher schools have a shared funding system. The school included in our study belonged to group D. Group D has parents with an average of 14 years of education ($SD = 1$) and an average monthly income equivalent to about US\$1,100. Finally, the private school included in this study belonged to group E, with an average mothers' education of 16 years and average father's education of 17 years ($SD = 1$), and average family monthly income equivalent to US\$3,000. Average income in Chile is US\$ 11039 a year as reported by the OECD (2013).

All children spoke Spanish as their first language and children with special educational needs were excluded from the study. Signed parental consent was obtained for all participants.

Materials and Measures

Materials. The book ‘A boy, a dog, and a frog’ by Mercer Mayer (1967) was used to assess narrative skills. The book is a wordless picture book, consisting of a series of pictures depicting a clear plot line. The story is about a child who goes to the forest with his dog looking for frogs. They see a frog and try to catch it, but after several attempts they decide to go home. As they leave, the frog realizes that she is alone and decides to follow the boy and his dog. Finally they all meet in the boy’s house and become friends. The book has 29 pages and the full version was used.

The narrative task was a modified version of the ‘Narrative Comprehension’ task developed by Paris and Paris (2003) and had three parts: picture-walk, question answering, and storytelling *with* the book. The original task did not include a storytelling task, only a retelling without the book. In this study, we use storytelling with the book available to reduce the memory demands of the task. Each part of the task was tape recorded and transcribed in CHAT format (MacWhinney, 2000) by a trained undergraduate research assistant. The CHAT format consists of a transcription method that allows the use of language analyses programs and it has been extensively used in the coding of narrative productions.

Picture-walk. This first part of the task had the aim to familiarise the child with the book and its plot. Children were told to look at all the pages in the book from the beginning to the end, and that later they would be asked to tell the story.

Questions. Children were asked a set of 10 questions about the story, translated and adapted from the work of Paris and Paris (2003) to tap memory and understanding of the following components: characters, setting, mental states (feelings, thoughts, dialogue), initiating event, problem, resolution, prediction and theme. The questions used in the study were in Spanish and a back translation of the full set is provided in Table 1

INSERT TABLE ONE AROUND HERE.

Storytelling with the book. In this part of the task, children were asked to tell the story using the book. Their productions were recorded, transcribed, and scored later.

Scoring

Questions. The rubric developed by Paris and Paris (2003) was translated and adapted to fit the questions with the book used in this study. Each question had two parts. The first identified a particular element in the story (e.g. feelings); the second required an elaboration of this (e.g. the cause of the observed feeling). For example: What do you think the boy is saying here? Why do you think that? Scores were awarded as follows: 2 points if the answer included identification and elaboration of the topic, 1 point if only one element (identification or elaboration) was included, and 0 points if none of the elements was present in the answer. Two undergraduate research assistants acted as independent coders and scored all the responses to the questions. Considering all the questions, the percentage of agreement was between 72% and 100%, and the kappa coefficient was between .56 and .70. All discrepancies between the two coders were resolved through discussions among the coders. The rubric and reliability scores are provided in Table 2. Questions 1 and 2 (characters and setting) were not included in the analyses as they do not evaluate coherence.

INSERT TABLE TWO AROUND HERE

For the analysis, questions were grouped into three elements: problem, resolution, and mental states. A mean score was calculated for each element. For example, questions about feelings, thoughts, and dialogue were grouped as ‘mental states’ and the mean score for these items was used in the analysis.

Storytelling. The independent stories produced by the children in response to the storytelling part of the task were coded for coherence. Story coherence in these narratives was evaluated using a rubric elaborated by the first author based on the same general criteria used to evaluate answers to questions. Story elements were grouped in the same three categories: problem, resolution, and mental states. Each of these elements was scored from 0 to 2 points depending on two main criteria. The first refers to identification. If the child demonstrated recognition of the main problem, the resolution, or the character's mental states, s/he received one point for each. If s/he could link these elements with relevant relations (e.g. causal), s/he was awarded two points. No points were awarded when identification and relations were not established. As above, two independent coders scored all the narratives. Reliability scores were good, similar to those reported by Paris and Paris (2003): for problem, 80% of agreement and kappa = .70 between coders was reached; for resolution, 100%, kappa = 1, and for mental states 90%, kappa = .81. All discrepancies between the two coders were resolved through discussion.

Design

Within each type of school, children were allocated to one of two conditions (both $n = 30$), in which the order of task was manipulated: 'questions first' or 'narrative first.' Children were not randomly assigned as the two groups were recruited at two different time points (see the participants' section, above). Children recruited at one time point were allocated to 'narrative first' condition, and children recruited at the second time point, were allocated to 'questions first' condition. Each group included the same ratio of children from the three participating schools, so the two groups were similar in terms of sociocultural constitution. Both groups first looked at the book (picture-walk). The 'questions first' group were asked the set of questions immediately after the picture-walk, and then asked to narrate the picture book. The 'narrative first' group was

asked to produce their narratives immediately after the picture-walk and then asked the set of questions. All the research assistants that participated as coders were blind to order condition.

Procedure

The assessment sessions took place in the fall of kindergarten. Each child was assessed individually by a trained undergraduate research assistant during school time and in a quiet place in his/her school. The sessions were audio-recorded and later transcribed for scoring. After establishing rapport, the child was shown the recorder and how it worked. To start the task, the picture-viewing was introduced with the following instruction: "Now I want to show you this book. This book does not have any letters or words, but the pictures tell the story. This story is about a boy, a dog and a frog. First I want you to look all the pictures paying attention so you can tell me the story later. OK, now look at all the pictures." Once the child finished, the examiner asked: "Did you finish?" Children in the 'questions first' condition were then given the following instruction "Now, I want to ask you some questions about the story." The ten questions were asked in order (from 1 to 10). Finally, the storytelling was introduced with the following instruction: "Now, tell me the story" or alternatively, "Now, I want you to tell me the story." Children in the 'narrative first' condition were given the tasks in the reverse order. All of the children in this sample followed the set of activities as previously described. All the research assistants were Chilean and Spanish speakers.

Results

To see if *prior* exposure to questions had an effect on narrative production, three separate 2 (task: narrative or questions) X 2 (order: narrative first or questions first) X 3 (school type: public; private with voucher; private) mixed-factor analyses of variance were performed on the mean scores of the three elements of coherence that were evaluated: problem, resolution, and

mental states. Order and school type were the between-subjects factor, and task was the within-subjects factor. Order was included as a factor because it allows us to determine whether or not both tasks benefitted from prior exposure to any activity that might prime performance, or whether questions first specifically benefitted the coherence of the narrative productions. School type was included to examine whether the effects are the same in all the school contexts. Task was considered as a factor due to the role questions might have as a scaffold on narratives.

INSERT TABLE THREE AROUND HERE

Problem

Descriptive statistics are shown in Table 3. A significant main effect of order was found, $F(1,54) = 5.26, p = .03$, partial $\eta^2 = .09$, because, in general, higher scores were obtained on the task that was performed second. The main effects of task and school type were not significant, $F(1, 54) = 1.08, p = .30$; $F(1, 54) = 2.75, p = .07$, respectively. The main effect of order was qualified by a task X order interaction: $F(1,54) = 18.74, p < .001$, partial $\eta^2 = .26$. Paired samples t-tests were computed to identify the source of the interaction. Within each order condition, higher scores were obtained in the second task: questions were better than narratives in the narrative first condition, $t(29) = 2.98, p < .006, d = .55$, and narratives were better than questions in the questions first condition, $t(29) = 3.32, p < .002, d = .76$. This mirrors the main effect. The interaction arose because the order manipulation had a different effect on each task. For narrative production, higher scores were obtained when the questions were asked first: $t(58) = 3.80, p < .001, d = .98$. For question answering, performance was comparable when questions were asked first or second, $t(58) = .76, p = .45$.

Resolution

Descriptive statistics are shown in Table 3. No main effects were found (order, task, and school type $F_s < 1$). A task X order interaction was obtained, $F(1,54) = 7.81, p = .007$, partial $\eta^2 = .13$, which was analysed with paired samples t -tests, as before. First, within each order condition, a different pattern was found: questions were better than narratives in the narrative first condition, $t(29) = 3.53, p = .001, d = .64$, but there was not a significant difference between tasks in the questions-first condition, $t(29) = .85, p = .40$. Across conditions, narrative productions were awarded higher scores when questions were asked first, $t(58) = 2.83, p = .007, d = .72$. However, performance on the questions did not vary significantly by order, $t(58) = .35, p = .73$. There was a significant interaction between order and school type, $F(1,54) = 3.72, p = 0.031, \eta^2 = .12$. Paired sampled t -tests showed that in public schools children got significantly higher scores in the questions' first condition $t(18) = -2.41, p = 0.031$. In public with voucher and private schools, there was no significant difference in the order of the tasks, $t(20) = -.43, p = .67, t(16) = .93, p = .37$, respectively.

Mental States

Descriptive statistics are shown in Table 3. A significant main effect of task was found, $F(1,54) = 31.65, p < .001$, partial $\eta^2 = .37$. The main effects of order and school type were not significant. There was a significant task X order interaction, $F(1,54) = 14.00, p = .000$, partial $\eta^2 = .21$. Paired samples t -tests within each order condition revealed that questions were better than narratives in the narrative first condition, $t(29) = 7.75, p < .001, d = 1.69$, but no significant differences were found between tasks in the questions-first condition, $t(29) = 1.25, p = .22$. Across conditions, narrative scores were better in the questions-first condition compared to narrative in the narrative-first condition, $t(58) = 2.59, p < .012, d = .67$, but question scores did not vary significantly by order, $t(58) = 1.98, p = .053$.

Summary of Results

A consistent task X order interaction was found. For each of the narrative elements assessed, performance in the narrative production task was significantly better when completed after answering a set of questions. However, performance on the responses to the questions did not vary significantly depending on order. In addition, the pattern of results in relation to the benefit of the question scaffolds did not vary in relation to type of school.

Discussion

This study investigated the narrative performance of Chilean preschoolers through two methods: narrative production and answering questions about the narrative. The order of questions and production was manipulated between participants. On all measures of coherence, the ‘questions first’ group produced more coherent narratives than the ‘narrative first’ group. In contrast, task order did not influence children’s ability to answer questions about the coherence elements of the narrative. We discuss these findings in relation to two different, but not mutually exclusive, perspectives: sociocultural theory and attentional effects.

Regarding cultural context, performance did not vary across school type, with the exception that children from public schools obtained significantly higher resolution scores overall when in the ‘questions first’ condition compared to children from other type of schools. It was previously explained that Chilean schools are not comparable in their socioeconomic profile. However, it seems that the difference did not impact the benefits of scaffolding in this task in this sample. One possible explanation is that we assessed fictional narratives. As discussed in the Introduction, fictional narratives are quite distinguishable from autobiographical or personal narratives, particularly in the degree of decontextualization. Narrative skills are a transitional step between oral and written language (Roth, Speece, & Cooper, 2002) and, in that continuum,

fictional narratives might be closer to written language, especially because the knowledge required to comprehend and produce a story is more sophisticated and requires knowledge of literary text that is not necessarily acquired during informal conversations. Consequently, despite children coming from schools that represent different backgrounds, differences were not apparent in their ability to construct fictional stories, a skill might be part of formal instruction acquired in the school.

Consistent with this explanation, previous studies have found that preschool instruction regarding literacy is quite scarce in *all* school types, suggesting that children are exposed to little instruction in general (Eyzaguirre & Fontaine, 2008; Strasser et al., 2009; Valenzuela, 2005). Further research is needed to explore this issue, as it has theoretical and practical relevance. On the theoretical side, it is important to provide strong evidence that fictional narratives represent an oral expression of written language and, in addition, it is important to disentangle what kind of narrative inputs children are exposed to at home and at school and how this affects their current narrative knowledge.

The main results provide clear evidence that exposure to questions about a story can improve the coherence of narratives. It might not be a surprise that narrative productions, when completed after answering a set of questions, were of higher structural quality. What is interesting, however, is that question answering did not benefit from prior production of a narrative. This finding demonstrates that the enhanced performance found for the narrative task was not simply due to more time spent thinking or talking about the story in any form, or that all children performed better in the second task. The effect was specific and related to prior completion of the question answering task.

As stated previously, children are exposed to narrative discourse from an early age, and questions may represent a familiar way of acquiring knowledge about this kind of language. In this study, the experimenter shared information with the child while asking questions, providing children with a scaffold on which they could build a more coherent representation of the story that was subsequently expressed in the narrative produced after questions. On the other hand, independent activities (like narrative production) do not constitute a scaffold. Our findings demonstrate the relevance of interaction in the acquisition and development of narrative skills.

Another reason for the findings that better narratives were produced after answering a set of questions is that the questions helped the child to attend to key story features and showed how events were or could be related (Pontecorvo, 1993, see also Graesser et al., 1994). Attention is certainly a factor that might account for our findings. Most questions were asked while looking at a particular picture, focusing the child's attention on that episode. Questions can also simplify task demands through the inclusion of presupposed information (Graesser et al., 1994), because the phrasing of the question necessitates the inclusion of important cues. For example, if we ask 'What do you think the frog is feeling?' we are implying that the frog is feeling something. Thus, this directs the child to think about what the frog is feeling. Finally, questions can highlight key aspects of the story (Graesser et al., 1994). In this way, questions about feelings or dialogue, for example, might highlight that these elements are important. All of these functions of questions might contribute to why independent narrative production is better when produced after answering a set of questions. Thus, questions about the overall structure scaffolded the ability to produce narratives with a better macrostructure. The type of questioning task used in this study might be crucial to support children's construction of coherent stories. Each question involves an identification and elaboration part, which might promote thinking about relations between the

events. In other words, these questions may have prompted children to make inferences about information that goes beyond literal meaning of the story, consequently supporting coherence.

The most salient implication to arise from these findings is that questioning can be used at home and school to boost the development of pre-readers' ability to construct and tell well-structured narratives, which may eventually translate into their ability to write well-structured stories. Another implication is that, because performance in the questions did not improve after narrative production, mere exposure or task repetition appears not to be sufficient to promote the development of these skills. Children need to be encouraged to tell both personal and fictional stories but, as this study shows, asking them specific questions about those stories may improve the quality of the story that they tell. When questions are used as a guided interactional support, they might help children by providing some of the knowledge about what makes a good story that they do not currently master. In this way, with the help of the adult, children can achieve higher performance on the task and advance their comprehension skills.

A general issue is that the sample used in this study was Chilean children, which constrains the implications of these findings, considering also the modest sample size and that the groups were not randomly assigned to the conditions. In addition, this study is limited by the use of a single picture book in a between-groups design. Further work is needed with a range of narrative materials and also educational contexts to determine if the effect of questions can be extended to different types of prompts and story content. An additional limitation stems from our focus on coherence. As outlined in the introduction, narrative structure can be analysed in terms of coherence and cohesion (Cain, 2003; Shapiro & Hudson, 1991). Further, coherence can be analysed by the type of link between events (Stein, 1988). Future research needs to evaluate whether the benefits are specific to the types of information included in the questions or whether

they are more general. For example, do questions that focus on coherence lead to the production of more cohesive narratives and/or are the narratives that are produced richer in detail? Finally, we only assessed the benefits of questions on the immediate production of a narrative. We have not established if children acquire sufficient new information or skills to generalise to future narrative production and comprehension. Such acquisition needs to be addressed in larger-scale intervention and longitudinal research.

This study found that answering questions was a useful technique that facilitated the subsequent production of more coherent narratives in preschoolers. Questions may have worked by focusing children's attention on key story elements. In addition, it was found that the ability to answer questions did not improve when answered after narrative production, highlighting the relevance of interactional mechanisms in the development of more sophisticated skills. In sum, the study provides evidence that questions can be used as an effective tool to promote narrative skills in preschoolers, considered a key ability for future school success.

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Table 1

Narrative Comprehension Questions for the Book 'A boy, a frog and a dog'

Element	Question(s)
Characters	Who are the characters in the story?
Setting	Where does this story happen?
Thoughts	What do you think the frog is thinking here (Identification) Why would the frog think that? (Elaboration)
Dialogue	What do you think the boy would be saying here? (Identification) Why would the boy be saying that? (Elaboration)
Initiating event	Tell me what happens at this point of the story (Identification) Why is this an important part of the story? (Elaboration)
Problem	If you were telling your friend this story, what would you say is going on now? (Identification) Why did this happen? (Elaboration)
Feelings	What do you think they are feeling here? (Identification) Why do you think so? (Elaboration)
Resolution	What happened here? (Identification) Why does this happen? (Elaboration)
Prediction	This is the last picture of the story. What do you think happens next? (Identification) Why do you think so? (Elaboration)
Theme	Think about everything that you learned from reading this book. What would you say to the boy or the frog so that the same thing doesn't happen again? (Identification) Why would you say that (Elaboration)

Note. Adapted from the “Assessing narrative comprehension in young children,” by S. Paris and A. Paris, 2003, *Reading Research Quarterly*, 38, p. 73.

Table 2

Rubric for Questions

Component	0 point	1 point	2 points	Examples	%	Kappa
Thoughts	No answer or inappropriate thought.	A proper thought is mentioned but it cannot be connected to relevant events.	The answer shows an inference of a proper thought that can be connected to other events/pages.	0: "The water is cold" 1: "Uh oh, people is coming" 2: "I should escape, they will try to catch me"	72	.58
Dialogue	No answer or an inadequate dialogue is proposed.	An adequate dialogue is proposed but it cannot be connected to other relevant events.	The answer refers to an adequate dialogue that can be connected to other events/pages.	0: "The boy is wearing a bucket" 1: "Stupid frog!" 2: "I will catch that silly frog sooner or later"	81	.70
Initiating Event	No answer or the initiating event is not identified	The initiating event is identified	The initiating event is identified	0: "The boy is full of mud" 1: "The	81	.56

	correctly.	but no relations are established to other story events.	and connected to other story events.	boy is leaving really angry” 2: “The boy is going, leaving his footprints, and the frog is looking worried”		
Problem	No answer or the problem is not identified correctly.	The problem is identified but no connections with other story events are established.	The answer identifies the problem and connects it to other relevant information in the story.	0: “There is a frog there” 1: “The frog is sad” 2: “The frog is sad because the boy left and leave her alone”	72	.57
Resolution	No answer or the resolution is not identified correctly.	The resolution is identified but no connections with other story	The answer identifies the resolution and connects it to other relevant information	0: “The frog is in the head of the boy” 1: “The frog is happy”	81	.69

		events are established.	in the story	2: "The frog found them and everybody is happy now. They are friends now"		
Feelings	No answer or non-adequate feelings are mentioned.	A proper feeling is mentioned but it can be related to other events.	The answer indicates a proper inference of feelings that are connected to other events.	0: "They are wet" 1: "The frog is happy because she is smiling" 2: "The frog is happy because she is not alone anymore"	72	.57
Prediction	No relevant prediction.	The prediction uses only information included in the picture shown.	The prediction is related to previous story events and is not only about the picture	0: "More bubbles in the tub" 1: "They will have a long bath altogether" 2: "The	81	.67

			shown.	frog will be his new pet”		
Theme	The answer does not reflect the comprehension of story themes.	The answer is simple and uses information about only one aspect of the story.	The answer indicates the integration of multiple events with the aim of construct a theme at a global level.	0: “Don’t do it” 1: “Frogs are friendly” 2: “It is important to have friends and be nice”	100	1

Note. Adapted from the “Assessing narrative comprehension in young children,” by S. Paris and A. Paris, 2003, *Reading Research Quarterly*, 38, p. 73.

Table 3

The Mean Scores and Standard Deviations for the Elements of Narrative Production and Question-answering, by Task Order

Task	Order	Problem		Resolution		Mental states	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Narrative production ^d	Narrative first ^a	0.47 ^c	0.63	0.27 ^c	0.52	0.44 ^c	0.35
	Questions first ^a	1.10	0.66	0.73	0.74	0.73	0.50
	Total ^b	0.78	0.72	0.50	0.68	0.59	0.45
Question answering ^e	Narrative first ^a	0.75 ^c	0.34	0.67 ^c	0.71	1.11 ^c	0.44
	Questions first ^a	0.68	0.42	0.60	0.77	0.87	0.51
	Total ^b	0.71	0.38	0.63	0.74	0.99	0.49

^a $n = 30$. ^b $N = 60$. ^c When comparing the two tasks within each order condition, significant differences were found at $p < .01$. ^d Narrative production showed significant differences depending on order of the task at $p < .05$. ^e Question answering did not show significant differences regarding order.